

Visual Illusions of *dekoboko*

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The purpose of this design was to incorporate an unconventional design technique, *dekoboko* from Nakamichi (2012), with digital textile printing to create visual illusions and dimensions on a dress. The process of *dekoboko* involves creating a three-dimensional fabric object, such as a cube, protruding from a base fabric through the use of seams. Although not a new technique, the designers integrated it with digital printing to create an amalgamation of surreal printed dimensionality with actual dimensionality. Thus, this design contributes to a new way of integrating digital printing technique by strategically planning intricate digitized pattern pieces.

A 100% medium weight cotton broadcloth was used for the shell of the dress and nylon tulle as a petticoat to create fullness in the skirt areas. First, a basic bodice and a skirt were draped with muslin on a size 8 dress form. For the placement and patterns for the cube designs, a total of 18 cubes with different heights made out of medium weight paper were attached on the draped patterns. Using markers, seam lines were drawn on top of the draped patterns, joining the corners of the cubes; the seam lines were cut and flattened before cutting the patterns on the actual fabric.



Figure 1. Front

To create printed dimensionality, an upper left bodice piece was digitized into OptiTex PDS 12 pattern making software, then opened in Adobe Illustrator CS6, and three-dimensional squares were created in Adobe Photoshop 3D tool that were later placed on the digitized pattern. The digitized pattern was printed using the Mimaki TX2-1600 printer onto the cotton fabric. The printed fabric was steamed and ironed to protect it from color fading. Black and gray threads were machine stitched along the straight lines of the printed patterns to make the squares look more three-dimensional, creating optical illusions along with the actual squares. Finally, to highlight interesting seam lines of the dress, black piping was sewn between various seam lines, including the corners of the cubes.



Figure 2. Side Details

References

Nakamichi, T. (2012). *Pattern magic*. London: Laurence King Publishing.